

In The Claims:

1. (Currently Amended) A cervical prosthesis, ~~consisting of~~ comprising a lower cover plate (10) ~~which is configured~~ to be connected to a lower vertebral body (5), an upper cover plate (11) ~~which is configured~~ to be connected to an upper vertebral body (3), and a prosthesis core (12) ~~which forms~~ forming a ~~hinged~~ connection between the upper cover plate and the lower cover plate,

wherein the ~~bottom surface of the~~ lower cover plate ~~being~~ has a substantially flat bottom surface, ~~wherein the top face (14) of the~~ upper cover plate (11) has a top face which is convex at least in sagittal section.

2. (Currently Amended) The prosthesis as claimed in claim 1, wherein the top surface (14) of the upper cover plate (11) has a bulge which, in a sagittal section, lies between a circle contour with a radius of curvature of not more than 25 mm and an acute-angled contour (15) with an apex angle (19) of not more than 90°.

3. (Currently Amended) The prosthesis as claimed in claim 2, wherein the top surface (14) of the upper cover plate (11) is formed by a surface of rotation.

4. (Currently Amended) The prosthesis as claimed in claim 2, wherein the top surface (14) of the upper cover plate (11) is elongate in ~~the~~ a lateral direction.

5. (Currently Amended) The prosthesis as claimed in claim 4, wherein the top surface (14) of the upper cover plate (11) ~~is made up of~~ comprises three surface portions (36, 38), ~~of which the two outer portions (36) of which~~ are opposite surfaces of half rotation, ~~and of which the a portion (38) lying between them consists~~ the outer portions consisting of parallel generatrices (38) which connect ~~the~~ mutually facing limits of the surfaces of half rotation (36) to one another.

6. (Currently Amended) An instrument for milling ~~the~~ a vertebral surface (2) cooperating with the top surface (14) of the upper cover plate (11) of the prosthesis as claimed in one of claims 1 through 5, ~~wherein it has~~ comprising a base plate (20, 30) ~~suitable~~ configured for bearing on the lower vertebral body (5), and a milling tool (22) mounted on the base plate (20,

30) for the upper vertebral body (3).

7. (Currently Amended) The instrument as claimed in claim 6, wherein ~~the contour shape of the base plate (20, 30) is~~ has a contour shape adapted to the shape of the end plate (4) of the lower vertebral body (5).

8. (Currently Amended) The instrument as claimed in claim 6 ~~or 7~~, wherein the milling tool has an axis of rotation (24) ~~of the milling tool (22)~~ is arranged transversely with respect to the base plate (20, 30), and ~~the~~ has a working surface ~~of the milling tool (22)~~ that substantially matches a part (36), ~~designed as rotation shape~~, of the top surface (14) of the upper cover plate (11).

9. (Currently Amended) The instrument as claimed in claim 8, wherein the axis of rotation (24) of the milling tool (22) is fixed on the base plate (20).

10. (Currently Amended) The instrument as claimed in claim 8, wherein the axis of rotation (32) of the milling tool (22) is displaceable along the base plate (30).

11. (Currently Amended) The instrument as claimed in claim 6, wherein the milling tool (40) rolls on the base plate (41).

12. (New) The prosthesis as claimed in claim 1, wherein the prosthesis core forms a hinged connection between the upper cover plate and the lower cover plate.

13. (New) The instrument as claimed in claim 7, wherein the milling tool has an axis of rotation arranged transversely with respect to the base plate and has a working surface that substantially matches a part of the top surface of the upper cover plate.

14. (New) The instrument as claimed in claim 13, wherein the axis of rotation of the milling tool is fixed on the base plate.

15. (New) The instrument as claimed in claim 13, wherein the axis of rotation of the milling tool is displaceable along the base plate.